

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
ALEXANDER W. CLARK, ET AL.) Examiner: D. Redding
Application No.: N/Y/A) Group Art Unit: 1744
Division of Appln. No. 09/572,078,)
filed May 17, 2000)
Filed: Concurrently Herewith)
For: AUTOMATED)
MICROBIOLOGICAL TESTING)
APPARATUS AND METHOD)
THEREFOR) January 25, 2002

Commissioner for Patents
BOX PATENT APPLICATION
Washington, D.C. 20231

PRELIMINARY AMENDMENT
AND
INFORMATION DISCLOSURE STATEMENT

Sir:

Prior to calculation of the filing fee, and prior to examination on the merits, please amend the above-identified application as follows:

IN THE SPECIFICATION

Please substitute the paragraph starting at page 1, line 7 and ending at page 1, line 10 with the following replacement paragraph. A marked-up version of this paragraph, showing the changes made thereto, is attached.

--This application is a division of Application No. 09/572,078, filed on May 17, 2000, which is a division of Application No. 09/083,130, filed on May 22, 1998, which issued as U.S. Patent No. 6,096,272 on August 1, 2000, and which claims the benefit of, and incorporates by reference the entirety of, U.S. Provisional Application No. 60/047,481, filed May 23, 1997.--

IN THE CLAIMS:

Please cancel Claims 1-56, without prejudice or disclaimer of the subject matter presented therein.

Please add new Claims 57-68 as follows.

--57. A microbiological testing apparatus, having an incubation chamber, said chamber comprising:

a carousel assembly adapted to mount a plurality of test panels each having a plurality of wells for receiving a test inoculum fluid for producing a reaction;

an enclosure surrounding said carousel assembly for preventing intrusion of ambient light into said incubation chamber, said enclosure having a door for providing access to said carousel assembly;

a drive system for continuously rotating said carousel assembly to directly position the test panels for testing by said diagnostic microbiological testing apparatus;

a heating unit for heating said incubation chamber; and

a temperature controller for controlling said heating unit to maintain the temperature of said incubation chamber within a predetermined temperature range.

58. The microbiological testing apparatus according to Claim 57, wherein the carousel assembly further comprises a carrier adapted to receive and carry the test panels.

59. The microbiological testing apparatus according to Claim 57, further comprising means for determining a predetermined position of the carousel assembly.

60. A microbiological testing apparatus, comprising:

a carousel assembly, comprising:

a frame adapted to receive a panel carrier; and

said panel carrier for carrying a test panel having a plurality of wells for receiving a test inoculum fluid for producing a reaction, said panel carrier receiving the test panel so as to position the test panel in a predetermined manner.

61. A microbiological testing apparatus according to Claim 60, further comprising means for indicating a completion of testing.

62. A microbiological testing apparatus according to Claim 60, further comprising means for determining the leading edge of the test panel received therein.

63. A method of operating a diagnostic microbiological testing apparatus, comprising the steps of:

continuously rotating a carousel of the testing apparatus to position a test panel between a light source and a light detection unit of the testing apparatus, the test panel including a plurality of wells for receiving an inoculum fluid comprising a reagent and a

microbiological test sample for producing a test reaction and being mounted on the carousel;

directing light from the light source toward the at least one test panel;

detecting with the light detection unit the light emitted from, or absorbed by, each of the wells of the at least one test panel due to the test reaction;

generating with the light detection unit a signal corresponding to the light detected from each of the wells; and

determining a test result for each of the wells based on the generated signal.

64. A method of performing diagnostic microbiological testing, comprising the steps of:

inoculating a plurality of test panels including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction;

mounting the test panels on a carousel of a diagnostic microbiological testing apparatus; and

operating the testing apparatus to cause (1) the carousel to rotate continuously to position at least one test panel between a light source and a light detection unit of the testing apparatus, (2) a light from the light source to be directed toward the at least one test panel, (3) the light emitted from, or absorbed by, each of the wells of the at least one test panel due to the test reaction to be detected by the light detection unit, (4) a signal corresponding to the light detected from each of the wells to be generated by the light detection unit, and (5) a test result to be determined for each of the wells based on the generated signal.

65. A method of operating a diagnostic microbiological testing apparatus, stored on a computer-readable medium, comprising:

instructions for continuously rotating a carousel of the testing apparatus to position at least one test panel between a light source and a light detection unit of the testing apparatus, the test panel including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction and being mounted on the carousel;

instructions for activating light from the light source to illuminate the at least one test panel;

instructions for detecting with the light detection unit the light emitted from, or absorbed by, each of the wells of the at least one test panel due to the test reaction;

instructions for generating with the light detection unit a signal corresponding to the light detected from each of the wells; and

instructions for determining a test result for each of the wells based on the generated signal.

66. A method for operating a diagnostic microbiological testing apparatus, stored on a computer-readable medium, comprising:

instructions for controlling the rotation speed of a carousel of the testing apparatus to move continuously at least one test panel and at least one normalizer panel past a light source and a light detection unit of the testing apparatus at a predetermined angular velocity, the test panel including a plurality of wells for receiving a inoculum fluid comprising a reagent and a microbiological test sample for producing a test reaction and being mounted on the carousel, the normalizer panel including a plurality of normalization

wells;

instructions for detecting with the light detection unit the light emitted from, or absorbed by, each of the normalization wells of the at least one normalizer panel;

instructions for normalizing the light emitted from, or absorbed by, each of the wells of the at least one test panel due to the test reaction and detected with the light detection unit;

instructions for generating with the light detection unit a signal corresponding to the normalized light from each of the wells; and

instructions for determining a test result for each of the wells based on the generated signal.

67. A method according to Claim 66, further comprising:

instructions for monitoring a light intensity of light from the light source directed toward the at least one normalizer panel; and

instructions for taking corrective action if the light intensity is outside a predetermined range.

68. A microbiological testing apparatus comprising:

a test panel having a plurality of wells, each well for receiving a test inoculum fluid;

a visible light source capable of producing light of different wavelengths;

a diffuser positioned between said visible light source and the test panel;

an ultra-violet light source;

an excitation filter positioned between the ultra-violet light source and the test panel,

wherein the light and the ultra-violet light cause the wells to emit or absorb light based on a test reaction of the test inoculum fluid;

an emission filter positioned between the test panel and an objective lens to filter out the ultra-violet light from the light emitted from, or absorbed by, the wells; and

said objective lens positioned between said emission filter and a detector, said objective lens focusing the filtered, emitted or absorbed light onto said detector.--

REMARKS

The present application is a division of copending Application No. 09/572,078, filed on May 17, 2000, which is a division of Application No. 09/083,130, filed on May 22, 1998, which issued as U.S. Patent No. 6,096,272 on August 1, 2000, and which claims the benefit of, and incorporates by reference the entirety of, U.S. Provisional Application No. 60/047,481, filed May 23, 1997.

Claims 1-56 have been canceled, without prejudice or disclaimer of the subject matter presented therein. Claims 57-68 have been added and are presented for examination, of which Claims 57, 60, 63-66, and 68 are in independent form.

Favorable consideration and early passage to issue of the present divisional application are respectfully requested.